TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/926,807
Filing Date	December 21, 2001
First Named Inventor	Jacobus Johannes M. MEYER et al.
Group Art Unit	1614
Examiner Name	K. Weddington
Total Number of Pages in This Submission	
Attorney Docket Number	742439-3

ENCLOSURES *(check all that apply)*

- ☒ Fee Transmittal Form
  - ☐ Fee Attached
- ☒ Amendment / Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☒ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
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- ☐ Assignment Papers *(for an Application)*
- ☐ Drawing(s)
- ☐ Declaration and Power of Attorney
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
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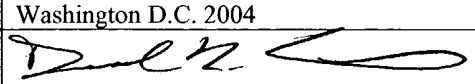
Signature	
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Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet		of	

Complete if Known	
Application Number	09/926,807
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Examiner Name	K. Weddington0742349-3
Attorney Docket Number	742439-3

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
		EVANS et al., Plumbagin from Diospyros olen, MDPI, April 16, 2004, Molecules 1999, 4, M93	

Examiner Signature		Date Considered	

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

Molecules **1999**, *4*, M93

Plumbagin from *Diospyros olen*

Philip H. Evans[1], William S. Bowers[1], Marc Litaudon[2] and Thierry Sevenet[3]

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[3]ICSN/CNRS 91198 Gif-sur-Yvette Cedex, France. Tel. (33-1) 69 82 31 03 (sevenet@icsn.cnrs-gif.fr).

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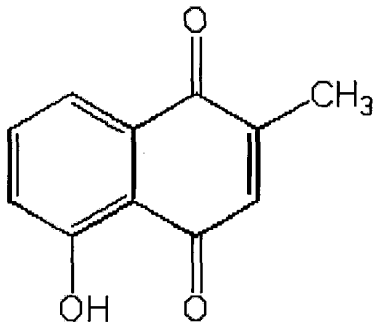

Plumbagin (5-hydroxy-2-methyl-1,4-naphthoquinone) (CAS Reg. No. 481-42-5) was isolated from the bark of *Diospyros olen* (Ebenaceae) *via* an antibiotic guided biological assay using the bacterium *Pseudomonas solanacearum*. *D. olen* bark, collected in New Caledonia, was extracted with dichloromethane and components separated by flash chromatography on silica. Plumbagin eluted with 30% diethyl ether in hexane. Further purification by preparative silica TLC developed with dichloromethane and by sublimation gave orange crystals. Plumbagin is a natural product of higher plants, previously found in the family Ebenaceae [1,2]. This is the first report of the occurrence of plumbagin in *D. olen*. [3].
M.p. 72-73°. Reported 78-79°
MS (m/z,70eV): 188 (100%), 173 (25), 160 (23), 131 (38), 120 (20), 92 (21), 63 (1 8).
^{1}H-NMR ($CDCl_3$): 2.20 (s, 3H), 6.81 (d, 1H), 7.25 (m, 1H), 7.62 (m, 2H), 11.95 (s, 1H).

Acknowledgment: The National Science Foundation Grant BIR 9419402, National Geographic Society Grant #5426-95.

References and Notes

1. Robinson, T. *Organic Constituents of Higher Plants*, 6th ed., Cordus Press, North Amherst, MA. 1991.
2. *Dictionary of Natural Products* v.3, p.3105. Chapman and Hall, London, 1994.
3. We reported in this short note the isolation and identification of plumbagin from a plant indigenous to New Caledonia. Although identified previously from the plant "plumbago" this is the first time it has been found in *Diospyros olen*. New Caledonia was part of the ancient megacontinent "Gondwanaland" which split into parts of present day Antarctica, Chile, New Zealand, New Caledonia, Australia, New

Guinea and other small isolated islands. While the original plant source of this compound, plumbago, is indigenous to the old world it is still retained in related plants after a possible 350 million years. It is estimated that New Caledonia has been separated from Gondwanaland for about 260 million years and allowing for the separation of the new and old worlds of an additional 100 million years yet this same chemistry is conserved as a very potent antibiotic which doubtless protects plants from numerous pathogens.

Sample Availability: Aldrich Chemical Co.